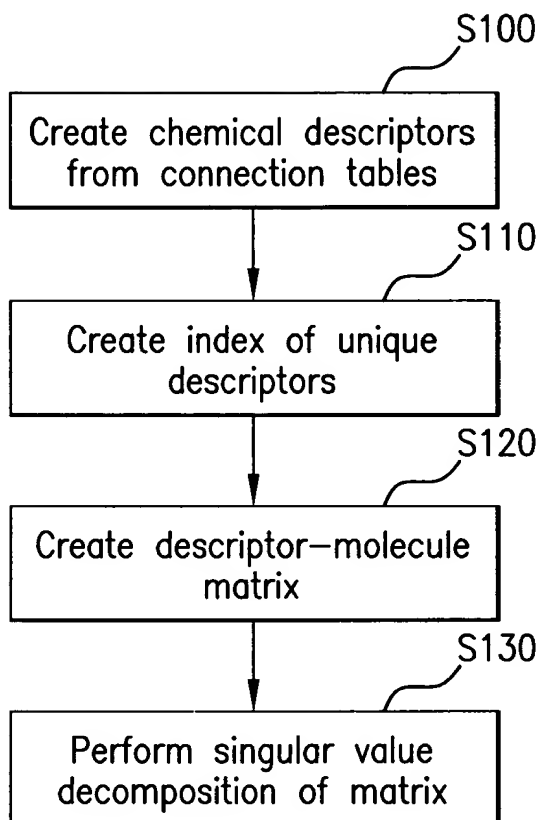




Process Flow Chart

LaSSI Database Construction



Query Handling

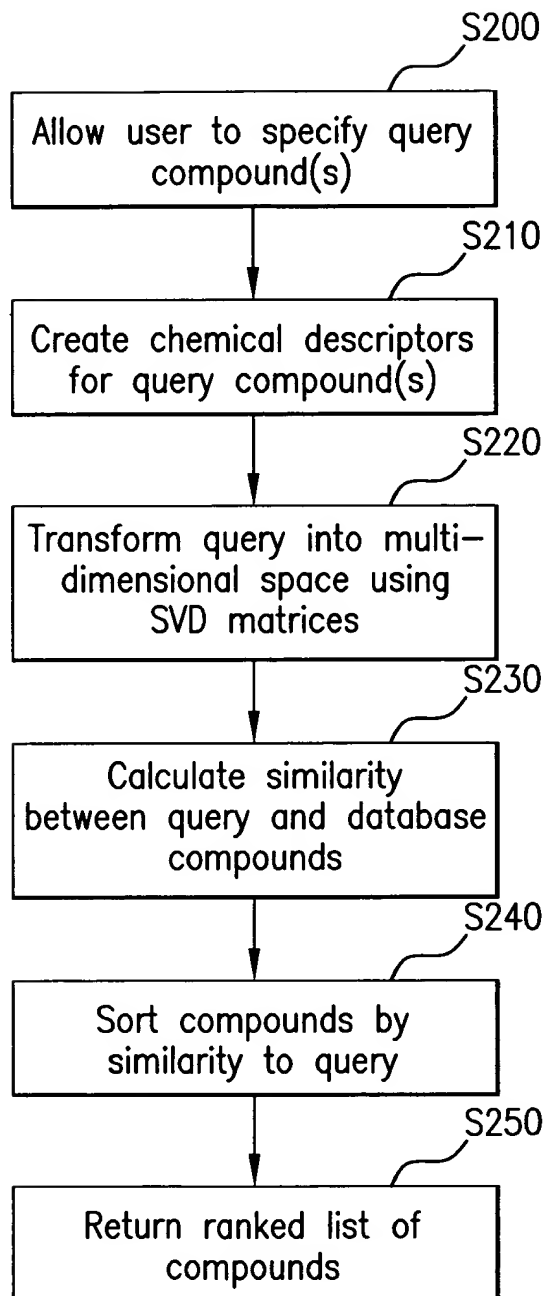
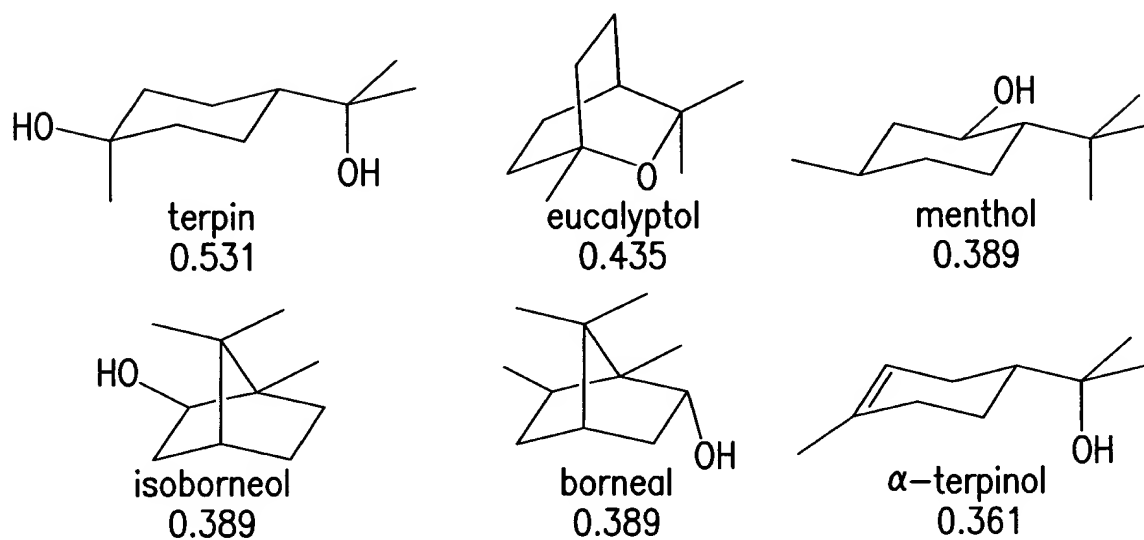
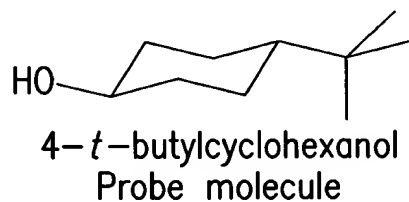


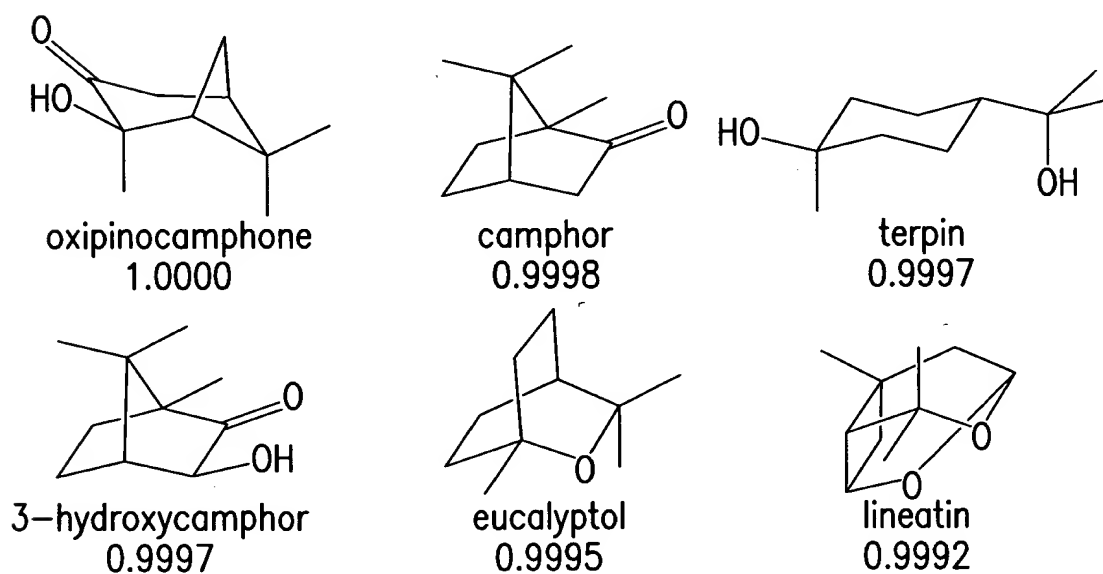
FIG. 1



Probe and its twelve most similar
monoterpenes selected using 2 singular values



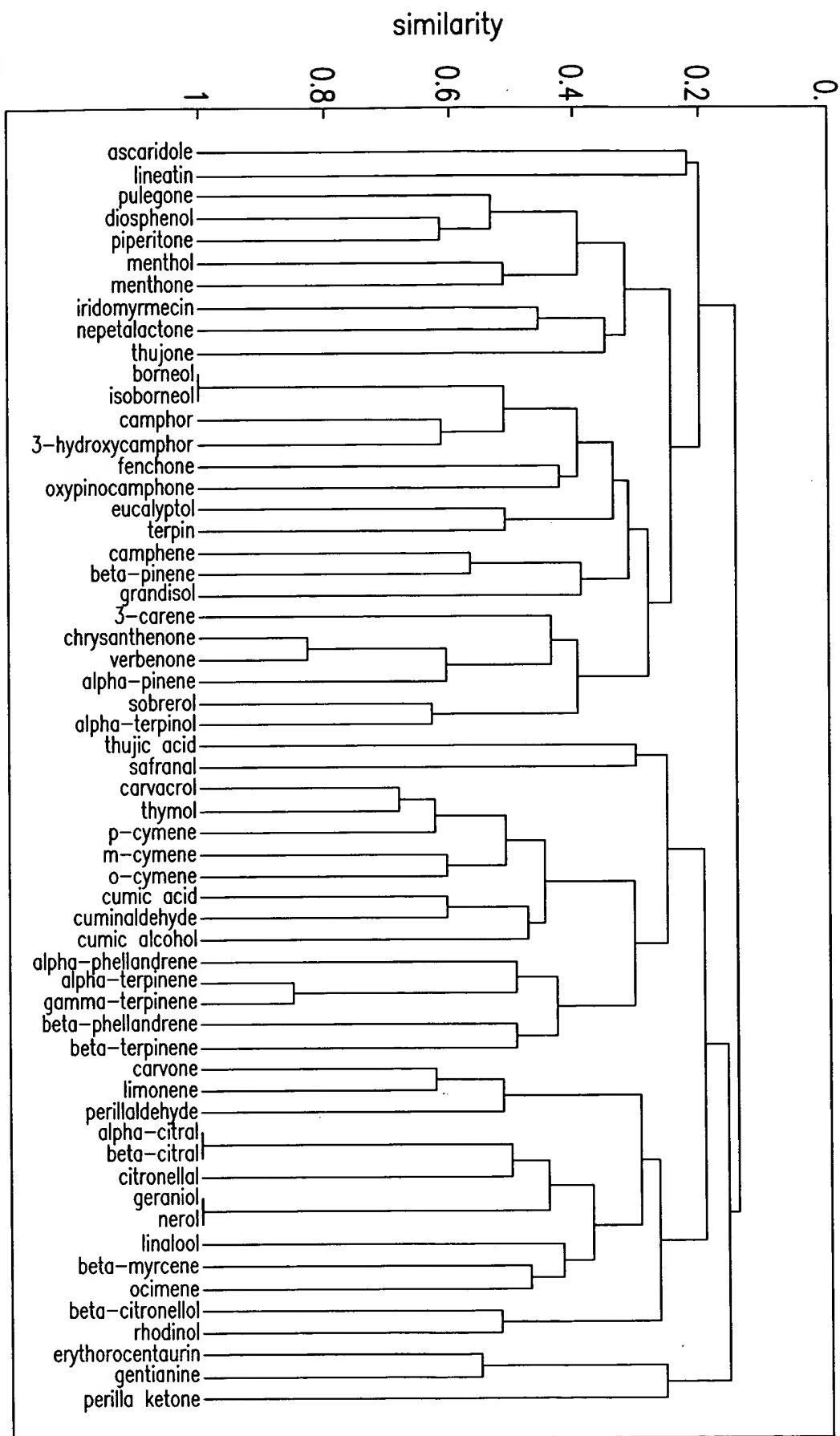
6 Most similar by Tanimoto similarity



6 Most similar by LaSSI similarity

FIG.2

FIG. 3A



Dendrograms Showing Similarities For Tanimoto and LaSSI
Tanimoto similarity, average linkage clustering

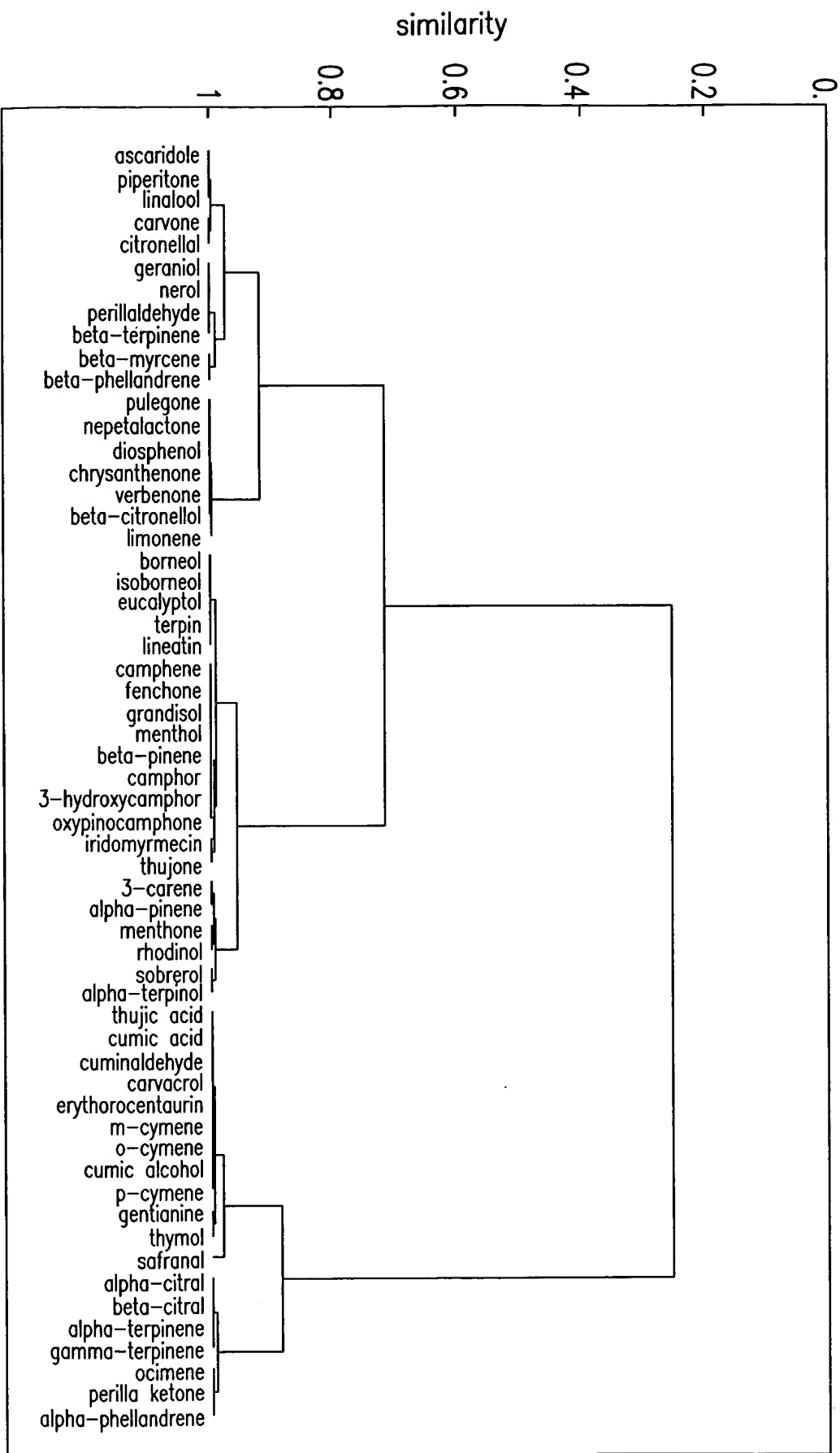


FIG. 3B

Dendrograms Showing Similarities For Tanimoto and LaSSI
LaSSI similarity (2 singular values), average linkage clustering

Two-dimensional Plot of Example Database Compounds and Probe Compound

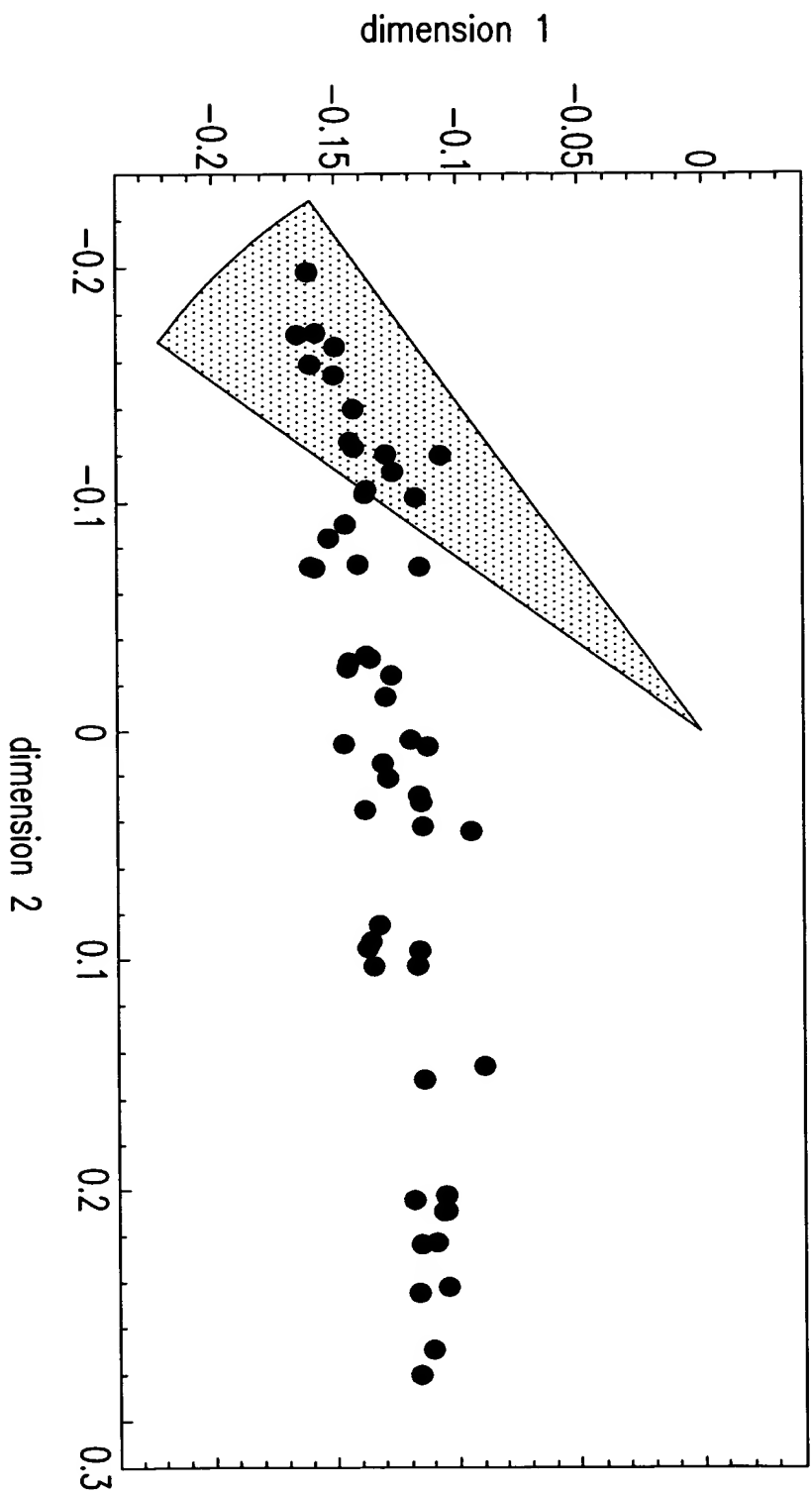


FIG.4



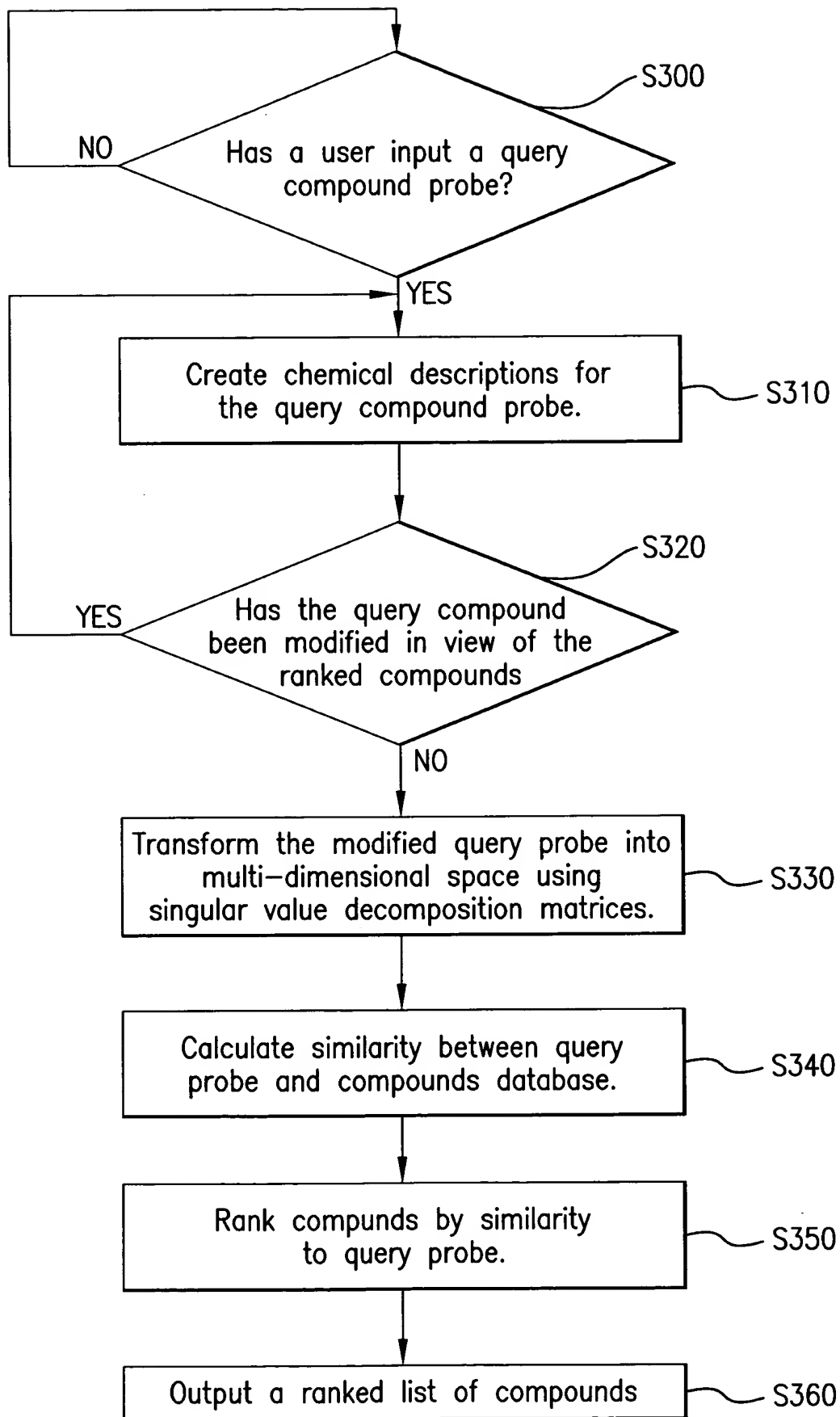
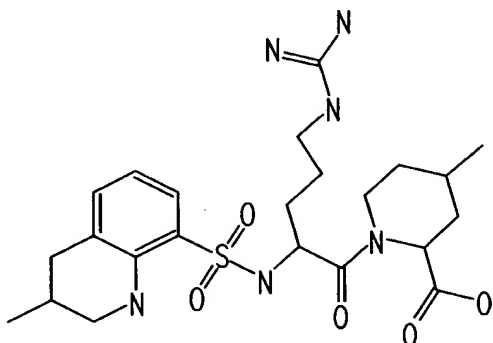


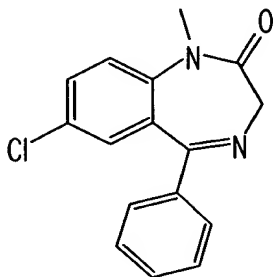
FIG. 5



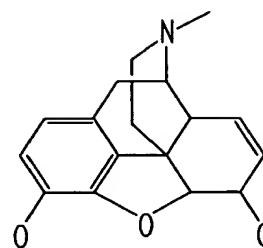
Standard probes used in this study. Each is labeled by the MDDR external registry, its name, and associated activity.



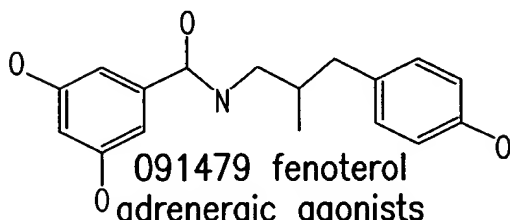
090744 argatroban
thrombin inhibitors



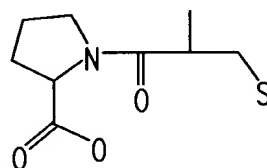
091323 diazepam
anxiolytics



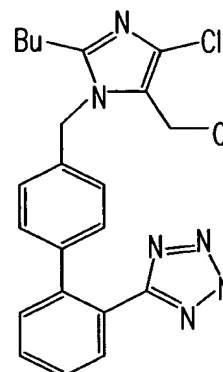
091342 morphine
opioid analgesics



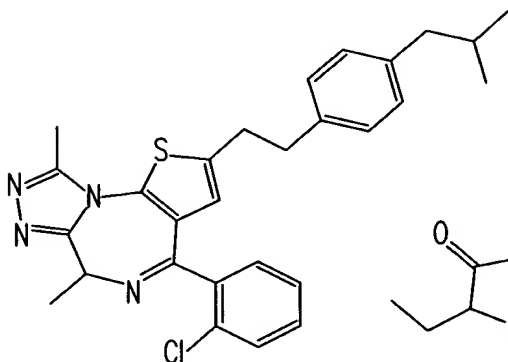
091479 fenoterol
adrenergic agonists



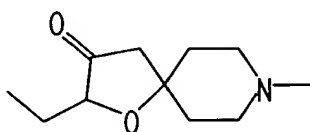
115230 captopril
ACE inhibitors



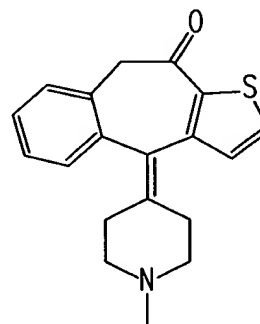
140603 losartan
All blockers



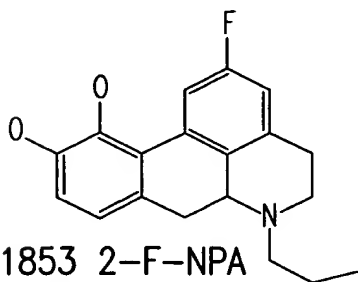
144822 israpafant
PAF antagonists



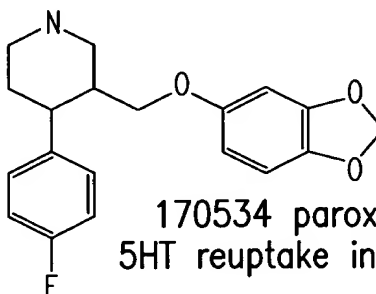
152580 YM-954
muscarinic agonists



158611 ketotifen
antihistamines



161853 2-F-NPA
dopamine agonists



170534 paroxetine
5HT reuptake inhibitors

FIG.6a

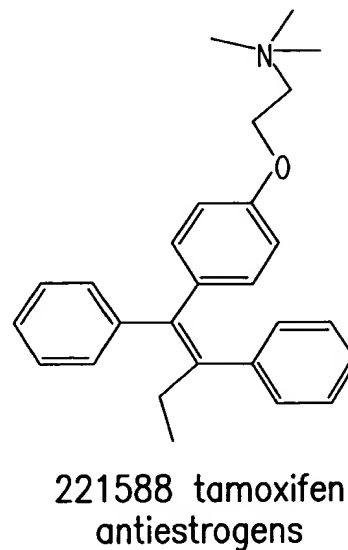
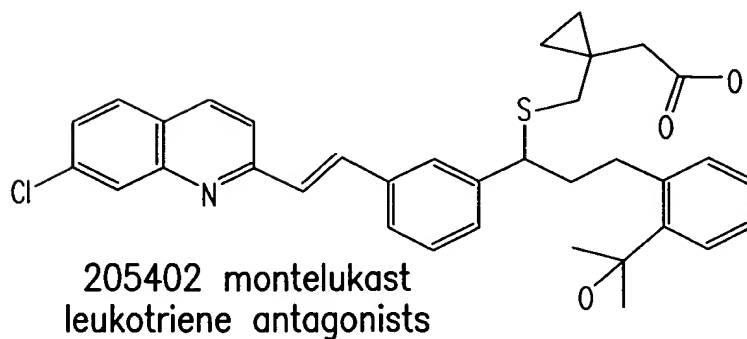
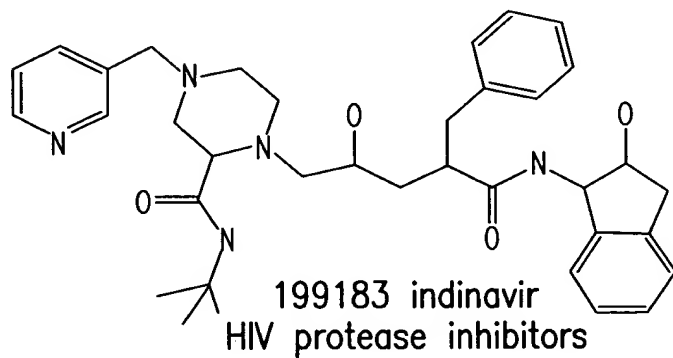
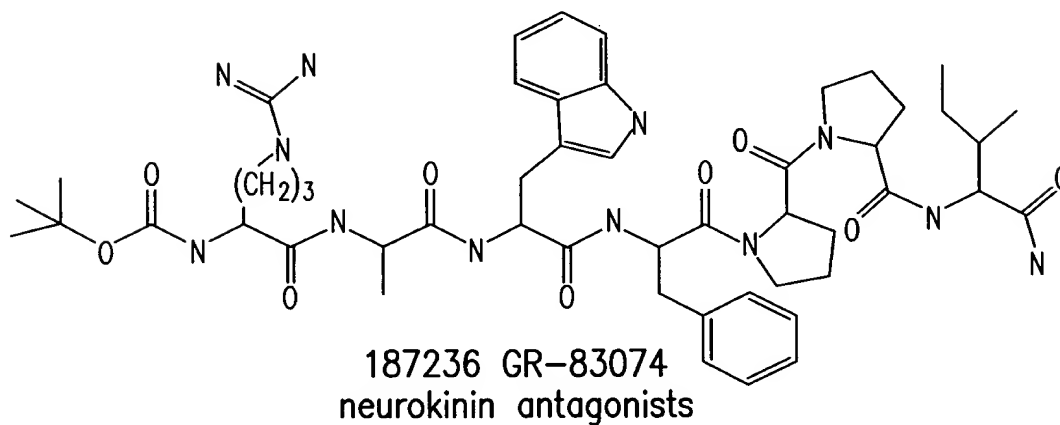
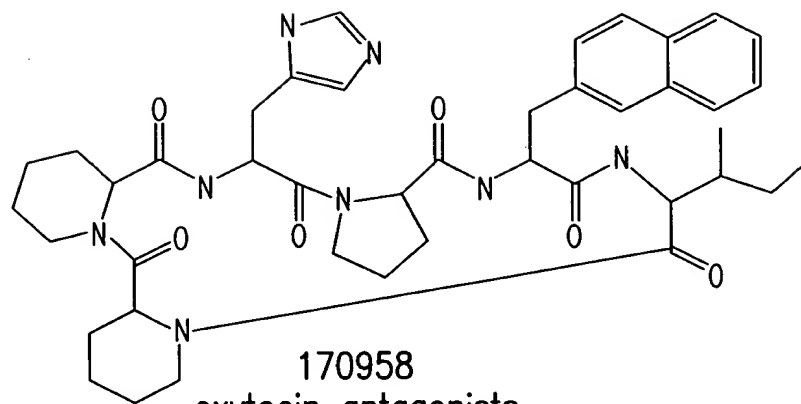
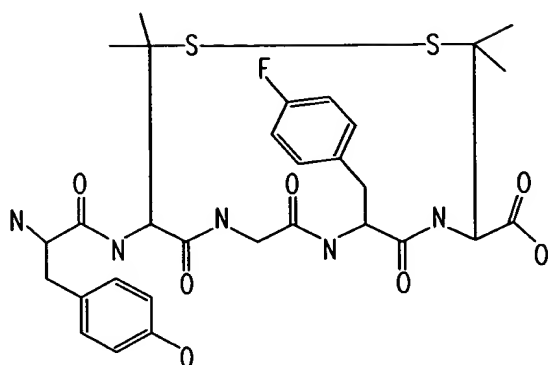
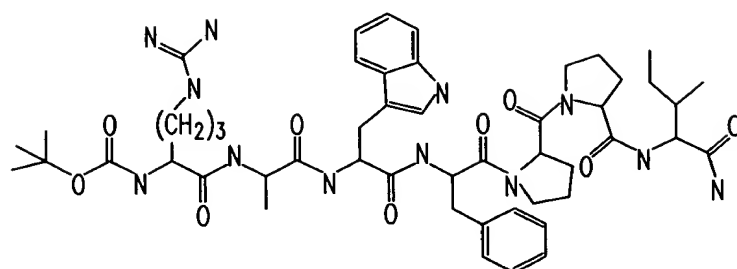


FIG.6b

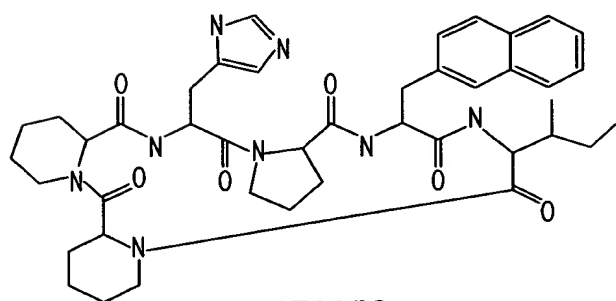
Probes used for peptide → non-peptide tests.



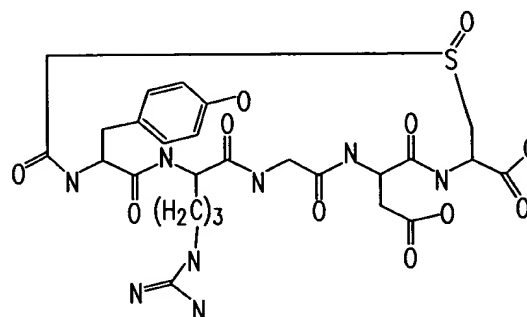
159880 F-DPDPE
opioid analgesics



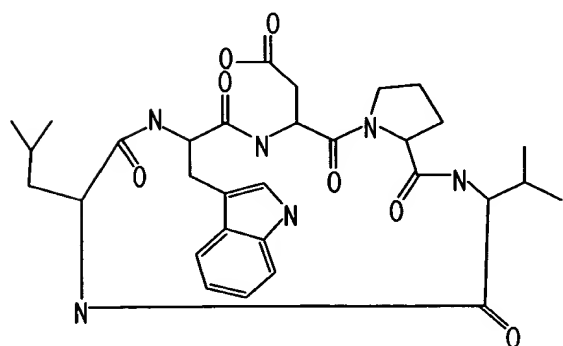
187236 GR-83074
neurokinin antagonists



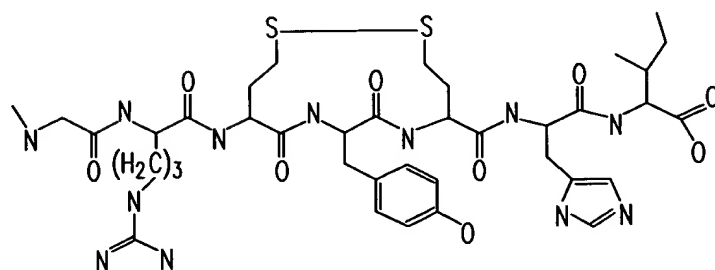
170958
oxytocin antagonists



188541 G-4120
glib/illa antagonists

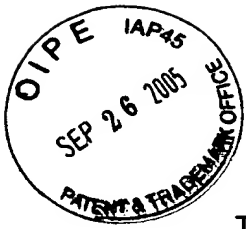


174556 BQ-123
endothelin antagonists



cycAll [Sar¹,Hcy^{3,5},Ile⁸]All
All blockers

FIG.7



The initial enhancement for LaSSI APTT vs the number of singular values shown for three examples.

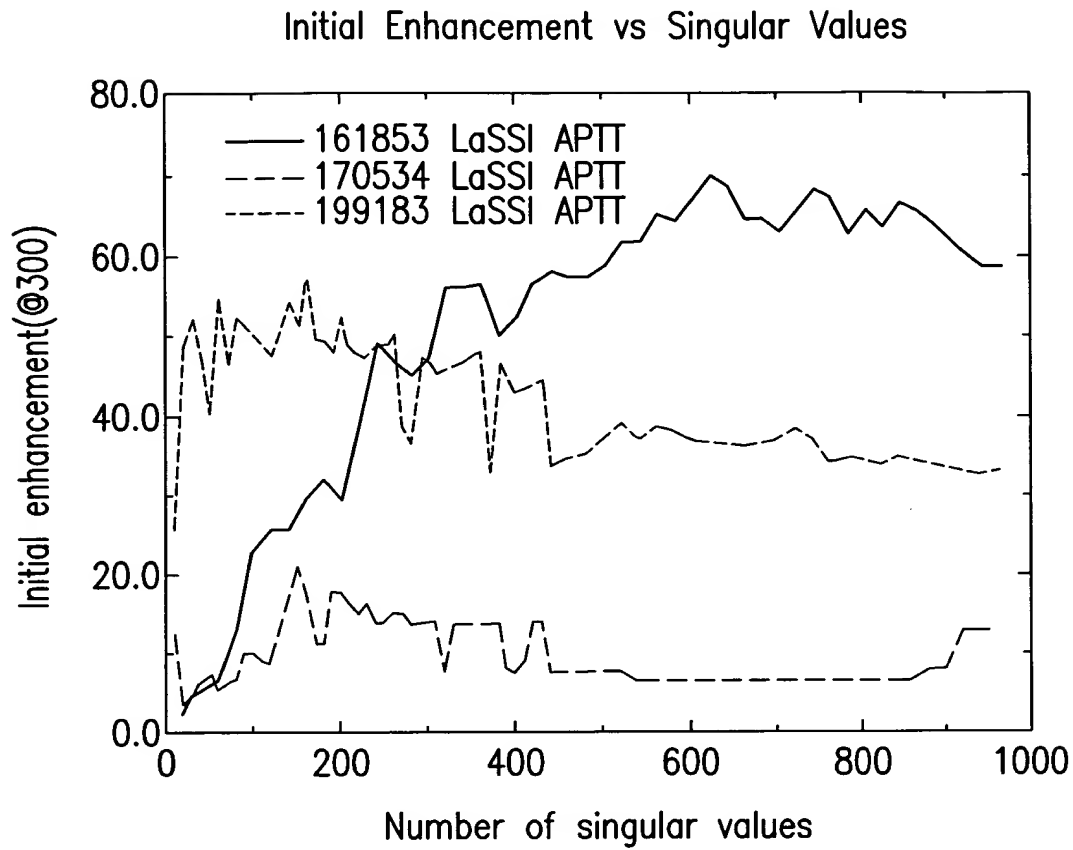
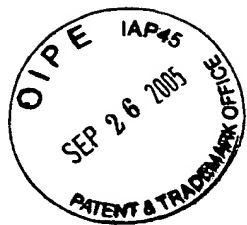


FIG.8



The correlation of rank for Dice APTT and LaSSI APTT. The example is 199183 using 170 singular values. Each circle represents a HIV protease inhibitor.

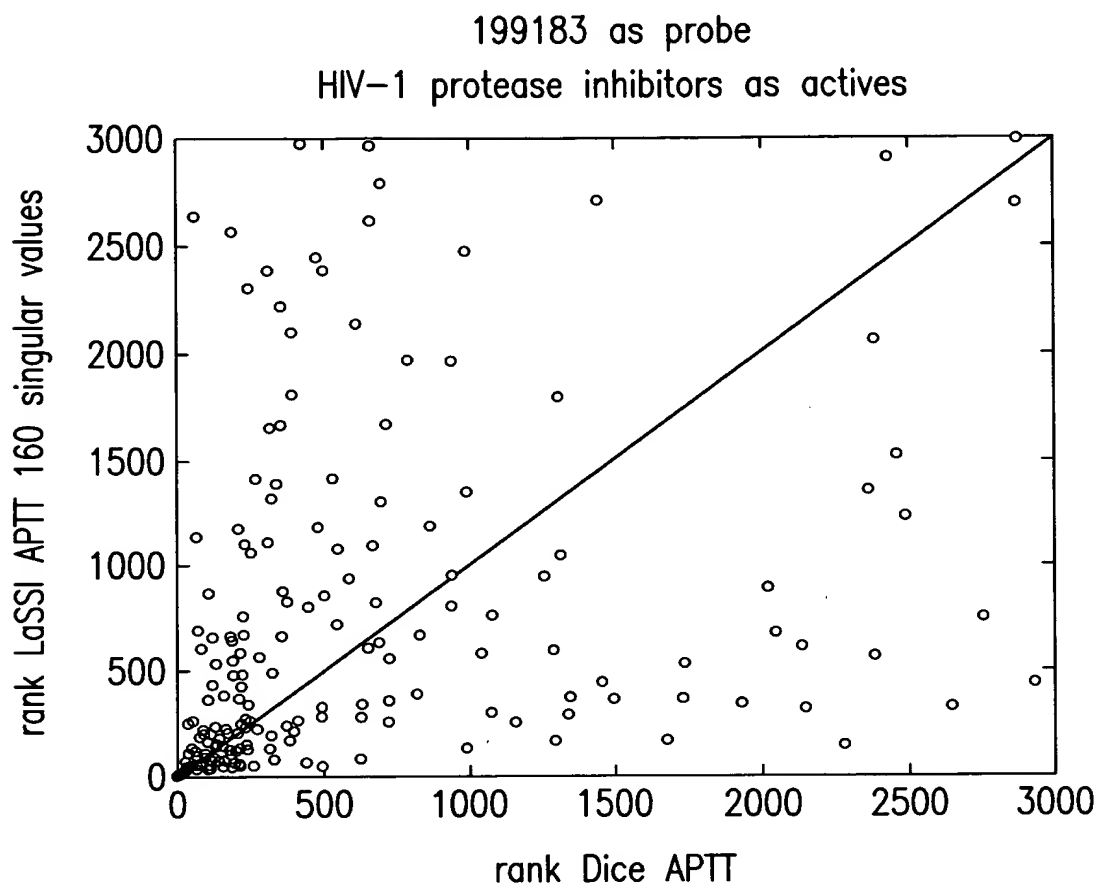


FIG.9

Selected compounds that have extremely different ranks in Dice APTT vs LaSSI APPT. The examples are 161853 with 800 singular values, 170534 with 150 singular values. The ranks in two types of search are indicated.

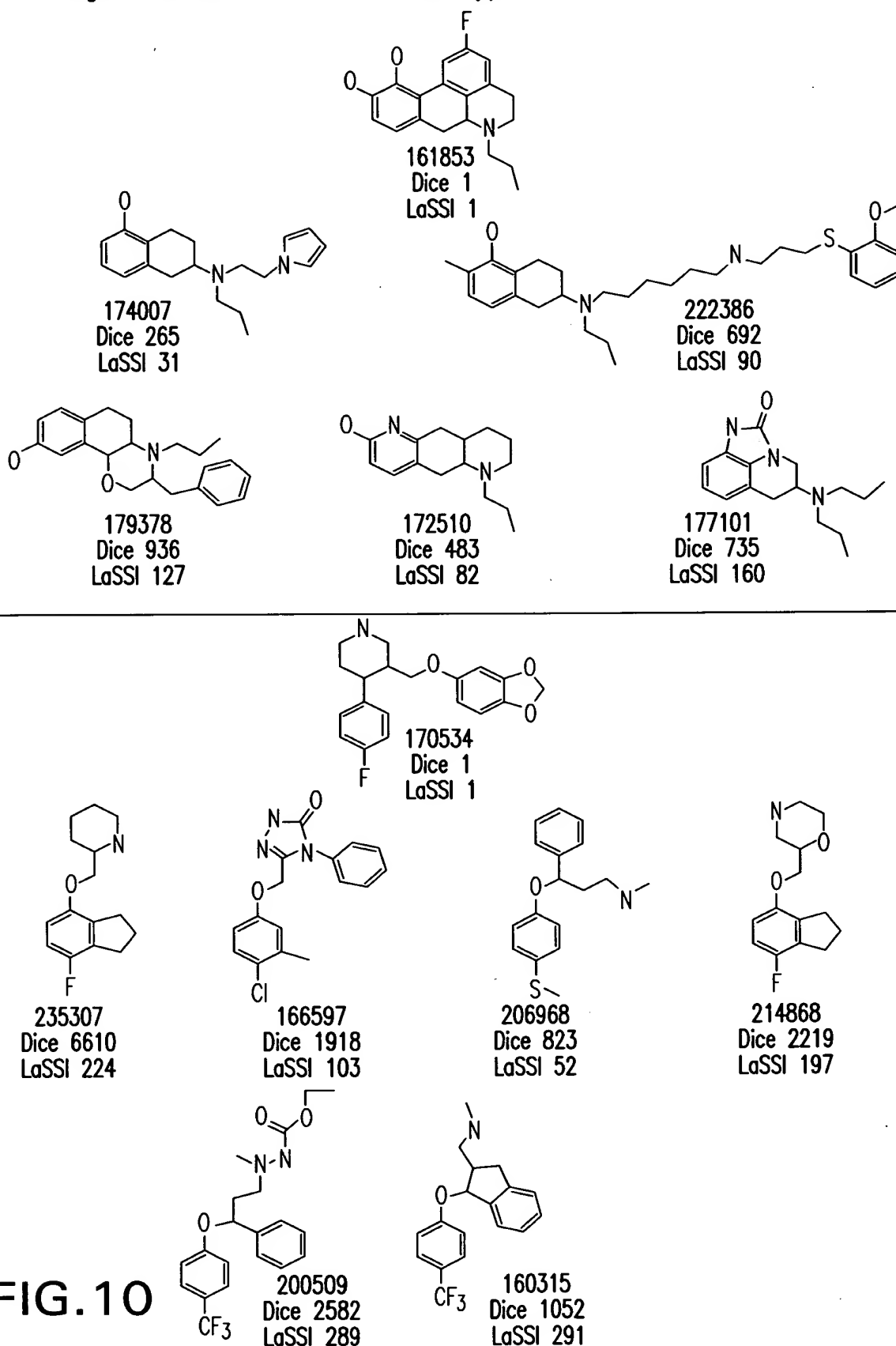


FIG.10



Mean similarity of the probe to each molecule in the top scoring 300 compounds (MSP300) for three samples. The MSP300 for Dice searches are shown as a horizontal lines. For comparison, the MSP300 for random sets of 300 compounds from MDDR would be 0.12–0.14.

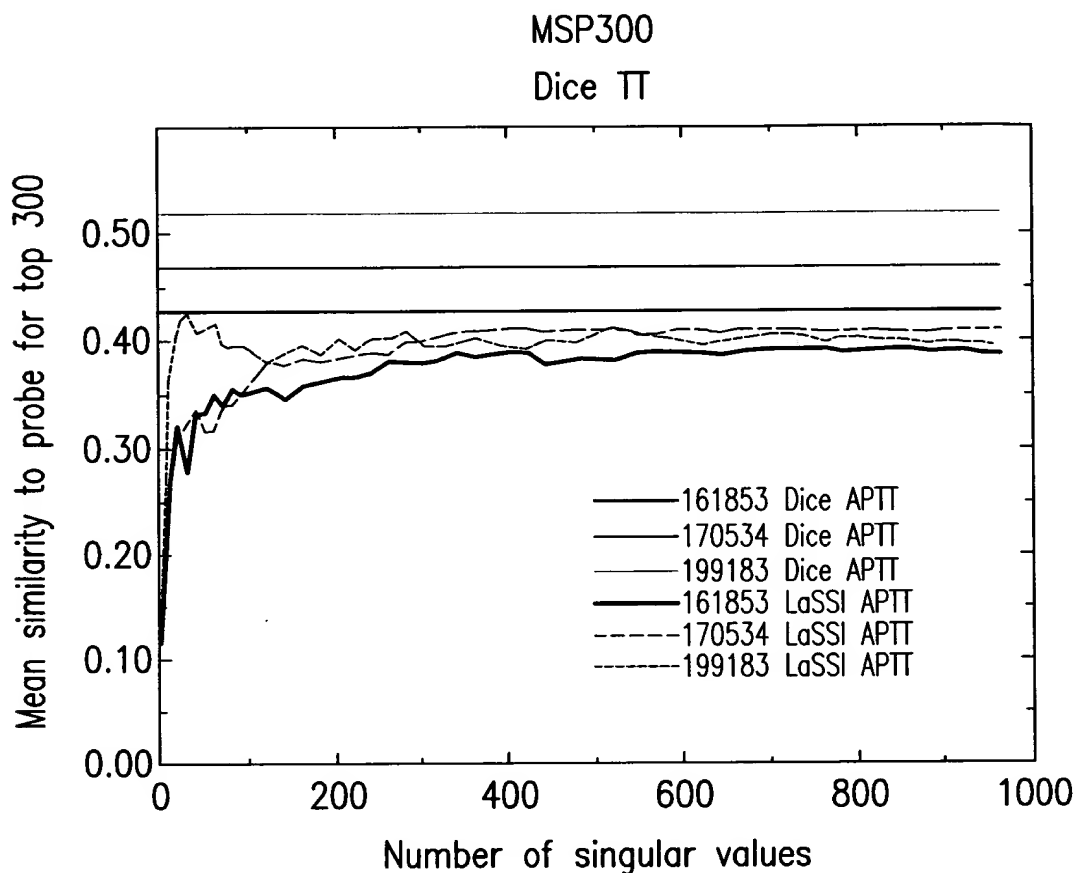


FIG. 11



Cumulative actives found vs compounds tested for 187236 as a probe.
The actives are oxytocin antagonists that do not contain a dipeptide moiety.

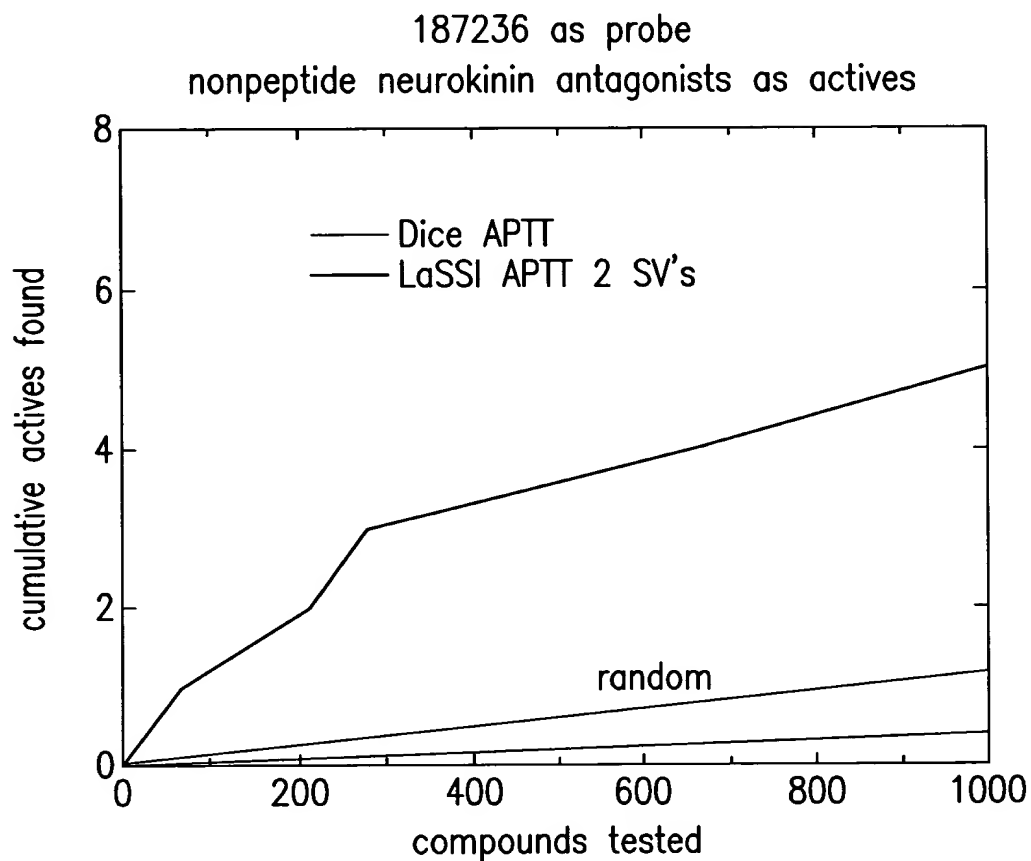
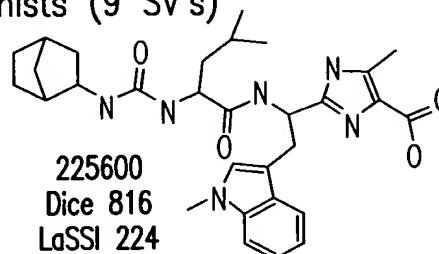
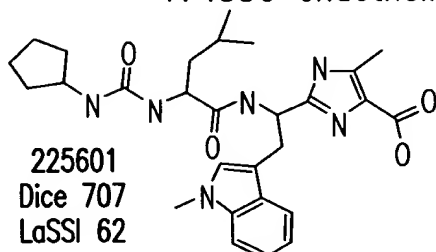


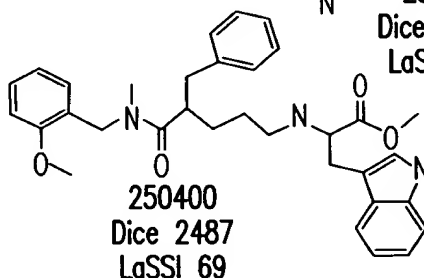
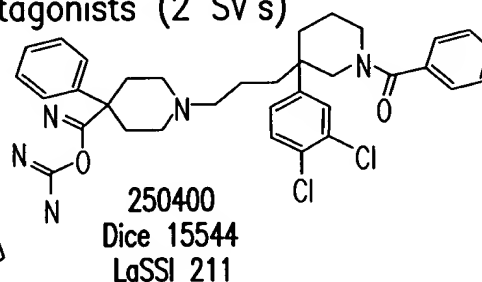
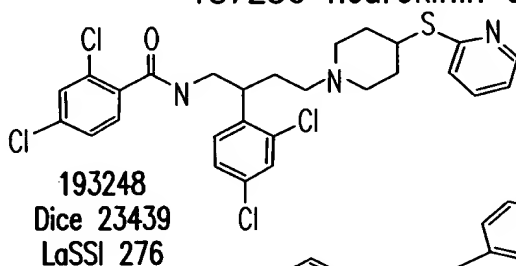
FIG.12

Selected non-peptide compounds that have extremely different ranks in Dice APTT vs LaSSI APTT for the statistically significant peptide to non-peptide examples.

174556 endothelin antagonists (9 SV's)



187236 neurokinin antagonists (2 SV's)



188541 gp11b/111a receptor antagonists (15 SV's)

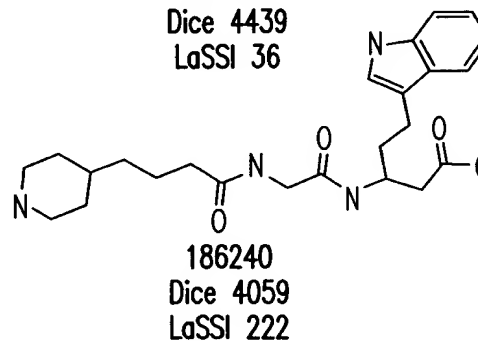
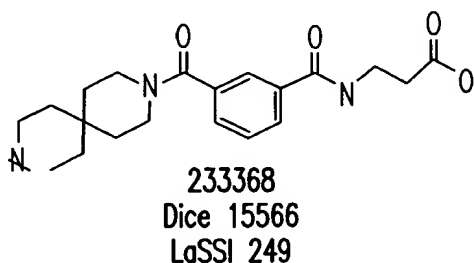
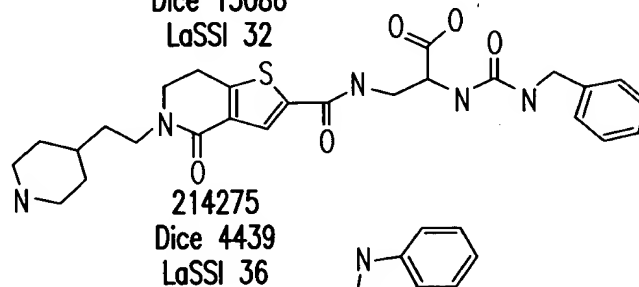
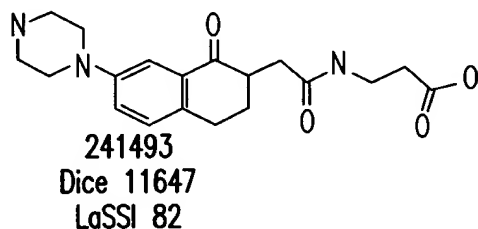
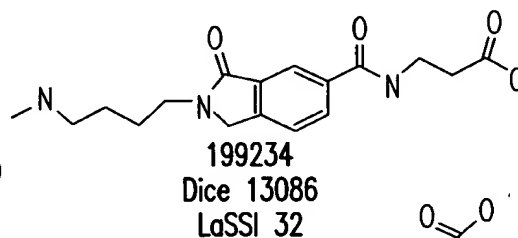
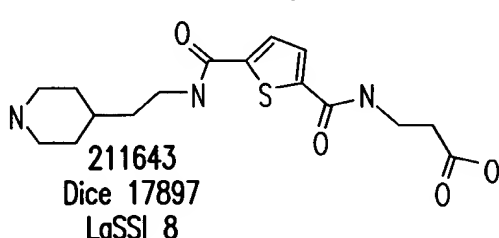


FIG.13

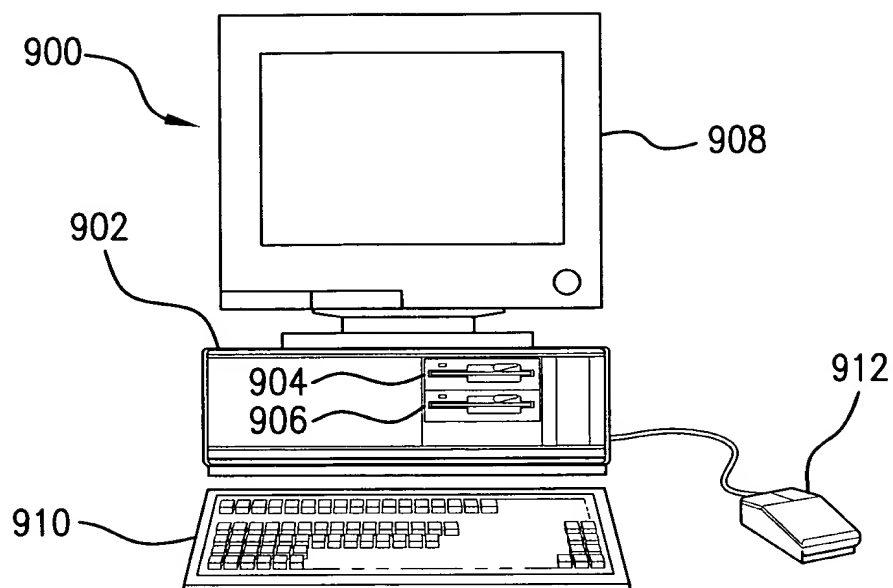


FIG. 14

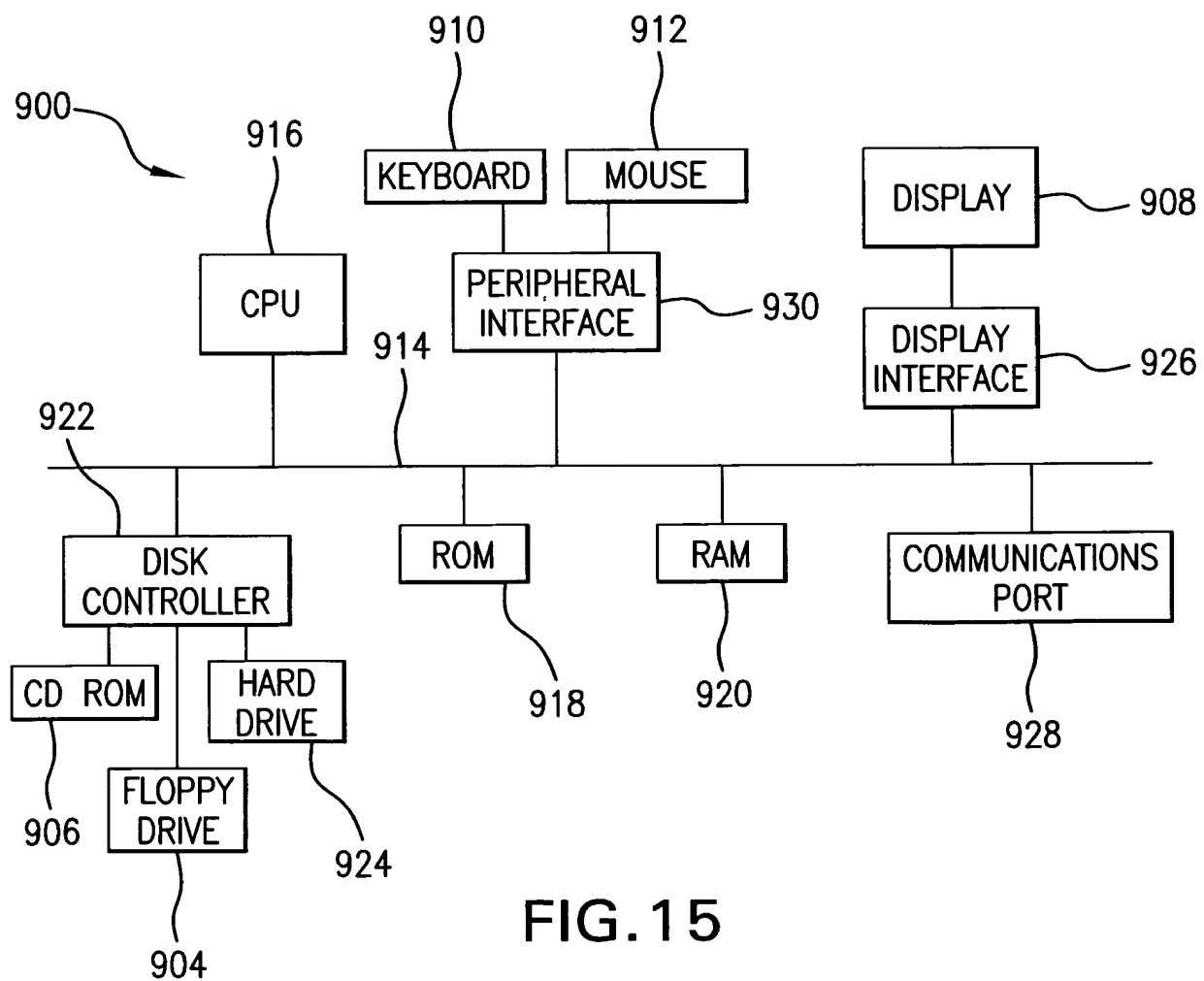


FIG. 15

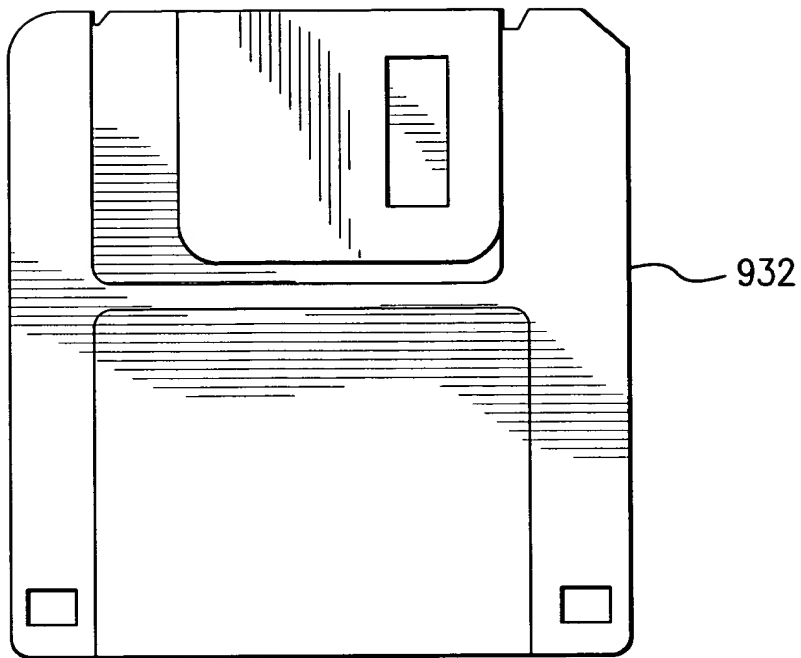
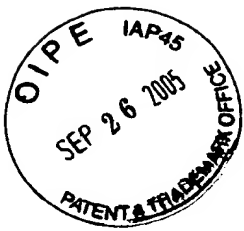


FIG.16